



## 14.4 Multiple Family Guidelines

*These Guidelines are intended to provide direction on the general form and character of townhouses, stacked townhouses, rowhousing, low to mid-rise housing and high-rise housing (outside the City Centre).*

The Multiple Family Guidelines and General Guidelines apply to all multiple family residential developments.



### A. GENERAL CONSIDERATIONS

*The intent is to carefully integrate new multiple family residential development into existing neighbourhoods.*

#### 14.4.1 Pedestrian-Oriented Streetscapes

*The intent is to give prominence to the pedestrian realm as a major element of the neighbourhood theme and character.*

##### 14.4.1.A Streetscape

- a) Streetscapes should animate the street and provide a high level of pedestrian interest along their public edges.
- b) Along major roads, provide exterior staircases up to the first habitable level wherever appropriate. Exterior stairs should be designed to be integrated into the overall architectural and/or landscape concept of the development.

- c) At the common entry to multiple family residential buildings, provide public seating and clear, pedestrian-oriented signage. Art at building entries is encouraged.
- d) Ground oriented units are encouraged in all types of multiple family developments. Grade-level residential units along publicly-accessible walkways and streets should feature individual front doors fronting the walkways and street, with individual paths leading from the public sidewalk or pedestrian walkways to front doors. The front doors of the units should be accessible and visible from the public sidewalk and should not be hidden by vegetation.
- e) Grade-level units should be no more than 1.2 m (3.94 ft.) above the grade of adjacent public sidewalks and walkways.
- f) Employ features such as front stairs, stoops, gateways, porches and weather protection to enhance the residential quality of unit and building entries, the visibility of such entries, a comfortable architectural rhythm along the street and a human scale.
- g) Create an attractive street frontage, using windows and doors to help animate the building facade and promote a more human-scale character. Windows and doors should be oriented streetward.
- h) Use internal drive-aisles to maximize the sense of open space and enhance pedestrian character. Where possible, vehicle and pedestrian access should be either specifically marked or separated from each other and appropriately located.
- i) Visually enhance pedestrian linkages and create a sense of arrival through the use of arrival plazas, special plantings and benches at intersections.

#### 14.4.1.B Entrances, Stairs and Porches

- a) Entrances to buildings and complexes should front public streets and be directly accessible from sidewalks or other public areas with minimal changes in grade. The entrances should be designed to be highly visible from the street and clearly addressed with large numbers.
- b) Convenient indoor waiting areas and outdoor pedestrian weather protection should be provided at building entrances.
- c) New developments should promote the provision of individual grade-level entries to residential units wherever possible, with intimate courtyards, landscape features and/or special weather protection at common building entries.
- d) Enhance the livability of dwellings and the vitality of parkways and linear walkways by providing secondary entrances, doorways, gates and garden entries to ground level units adjacent to pedestrian routes.

#### 14.4.1.C Yards

- a) Yards adjacent to streets, lanes, public walkways and pathways should be designed to be open and inviting and allow good visibility from adjacent public areas to building entries.
- b) Define the street edge through landscaping with layers of planting, low walls, hedges, or changes in grade along the property line.
- c) Yards should be raised no more than 0.5 m (1.64 ft.) above adjacent public sidewalks; low retaining walls in front yards along the street should not be higher than 0.5 m (1.64 ft.). In yards that abut public spaces, landscaped terraces no greater than 0.5 m (1.64 ft.) in height and no less than 0.75 m (2.46 ft.) deep should be used to reach the new grade.

#### 14.4.1.D Fences

- a) Fences or walls along the streetfront should be limited in height and length and should be supplemented with landscaping.
- b) Fences or walls should be no more than 15 m (49.2 ft.) long without a break or jog.
- c) Fences should be a maximum of 1.2 m (3.94 ft.) high when located within front yard of the street.
- d) Landscaping on the street side of fences should include plants of low maintenance varieties (e.g., hearty shrubs, groundcover and trees). Large evergreen hedging along the street is not acceptable.

#### 14.4.1.E **Fire Access**

- a) Fire lanes should conform to the City's Building Bylaw and be designed to meet the needs of the City's Fire Department. They should be similar in design to other access routes and, wherever possible, combined with pathways and other routes. Decorative forms of paving should be used both for aesthetic reasons and to distinguish them from common asphalt-paved vehicular access routes. Where they intersect or are combined with pedestrian pathways, distinctive paving should be used to highlight the dual function.

#### 14.4.1.F **Preservation of Existing Natural Features**

- a) Wherever possible, existing trees and natural features should be retained.
- b) Special attention should be paid to the preservation of mature trees. Any hard-surface area, including building footprint and driveways, should be planned and designed to maximize retention of existing woodlots or specimen trees. Existing mature trees and vegetation corridors should be retained and incorporated, wherever possible, into the design of external streetscapes and internal private landscapes.
- c) Special efforts should be made to retain mature trees by adjusting retaining walls to accommodate trees.

### 14.4.2 Building Scale and Form

*The intent is to ensure that all multiple family residential developments have adequate sunlight and are appropriately located on site.*

#### 14.4.2.A **Sunlight Access**

- a) Ensure that a minimum of 75% of dwellings and their private open spaces in each development receive direct sunlight every day of the year.
- b) To ensure sunlight access to residences, the minimum north-south spacing between adjacent buildings should be determined by the vertical angle of the sun at solar noon at the equinoxes.

#### 14.4.2.B **Diversity**

- a) Developments should include a variety of unit types and unit treatments to encourage architectural and social diversity.

#### 14.4.2.C **Adjacency Considerations**

- a) New multiple family developments should be designed to maintain a residential character and be compatible with adjacent uses.
- b) Side yard interfaces with adjacent single family housing should be particularly sensitive to issues of privacy/overlook. Consideration should be given to greater setbacks above the ground floor, special landscaping measures and/or orienting living areas away from neighbouring sites.

#### 14.4.2.D **Scale and Massing Considerations**

- a) The apparent length and mass of buildings should be reduced through architectural design and detailing. Establish residential scale through articulation of the building facade through the use of projections, recesses, solids and voids and by including house-like elements such as chimneys and multi-paned windows.
- b) Vary the design to include more than one building form on each site sharing common architectural elements.
- c) Break up the apparent length of individual buildings by expressing larger buildings as a series of smaller buildings, or as identifiable parts of a grander scheme. Building facades should be broken up into smaller components, with special measures used to reinforce a rhythm and scale that gives the appearance of individual units along the street (e.g., smaller components that express strong unit identity with direct grade access).
- d) Reduce the apparent height of buildings with architectural treatment that promotes recognition of individual storeys and avoids the appearance of sheer blank walls, for example:
  - give each building or portion of building a distinct top, middle and base;
  - use trim, intense colour accents, secondary roof elements, building recesses;
  - terraced building forms that emphasize lowered height of end units.
- e) Large projecting balconies are discouraged along streetfronts, as they emphasize building bulk. Recessed balconies will be permitted in some areas.



- f) Avoid the appearance of a solid wall of buildings by varying street edge treatment through use of strategically placed open spaces with intensely clustered plantings, staggered or varied building setbacks and other techniques.

#### 14.4.2.E **Space Between Buildings**

- a) Buildings should relate to the height and spacing of adjacent buildings. A ratio of 1:4 between the distance and height of the adjacent buildings should be considered.
- b) The size of spaces between buildings should be determined by designing for an identifiable use which enhances the amenity and enjoyment of residents.

### 14.4.3 Architectural Treatments

*The intent is to employ a variety of overall roof heights and forms, and to maximize light into units and to express the residential character of the neighbourhood through appropriately scaled and proportioned windows.*

#### 14.4.3.A **Roof Form and Elements**

- a) A variety of overall roof heights and forms should be employed within a multiple building proposal to give interest and offer a residential character.
- b) Sculpt and terrace upper floors in buildings over 4 storeys in height to reduce mass, create a transition in height and maximize views.
- c) Reduce apparent height of buildings and establish a pedestrian scale along walkways, semi-private open space and main vehicular entrances through the use of secondary roofs or trellises over entries, patios and other openings at lower levels.
- d) Consider pitched roofs to express a traditional residential character.
- e) Decorative elements close to the roof should emphasize and complement the roof pitch visible from the street.
- f) Mechanical equipment must be concealed from view and antennae, radio-wave receiving and transmitting devices, vents and similar obtrusive equipment should be situated where least visible from public areas.
- g) Skylights should be designed to minimize interruption of the roof line.
- h) In general, flat roofs are not considered appropriate for townhouses. However, this roof form might be appropriate in low to medium rise (and mix-use) developments at the perimeter of Neighbourhood Centre areas to reflect the transition character of these areas.

#### 14.4.3.B **Windows and Skylights**

- a) Orient principal windows to the south in order to maximize solar gain.
- b) Consider the use of various forms of projections, such as bay windows, as a device to maximize sunlight and views, provide interesting unit articulation and improve building mass.
- c) Locate windows to focus views, to maximize light penetration into units and to minimize opportunities to look into units from other units or from paths and open spaces around buildings.
- d) Traditional window treatment with a vertical impression should be used where visible from the street. Skylights, plastic bubble windows, tinted glaze and other non-traditional windows should not be used in prominent locations on buildings that are visible from the street.
- e) Windows should be openable, of residential scale and should add to the sense of neighbourliness, safety and security by providing visual interest while maximizing surveillance opportunities over public areas.
- f) The openable part of a window should be located a minimum of 0.6 m (2 ft.) above a floor as a safety precaution for small children.
- g) Windows, used singly or in combination, should be transparent at eye-level to reinforce the sense of surveillance over the street.
- h) Consider the use of skylights as a means to access light within a vocabulary of pitched roof forms, except where aircraft noise is of concern.

#### 14.4.3.C **Materials**

- a) Exterior cladding materials and detailing should be carefully considered to counteract the effects of the rainy west coast climate of Richmond. Stucco should be treated to prevent discolouration and particular care should be taken in detailing of north-facing facades.
- b) A variety of complementary materials and colours is encouraged for visual interest.
- c) Ensure the façades of the buildings are visually interesting through a sufficient level of surface and architectural detail.
- d) Select roofing materials that are suitable for the level of articulation desired in the roof forms.

### 14.4.4 **Pedestrian Access**

*The intent is to provide clear, convenient and safe pedestrian access to and within multiple family residential development sites.*

#### 14.4.4.A **Pedestrian Circulation**

- a) Pedestrian circulation should be provided for all major areas of the site. Pedestrian access throughout the site should be designed to be accessible to disabled persons.
- b) Consider designing the circulation system to encourage children's play throughout a development:
  - make the system safe for bicycles and tricycles. Drop curbs at road crossings; create traffic calming devices; vary the paving;
  - explore the possibilities of reclaiming hard surfaces as play areas;
  - accommodate play on internal roads through a design that avoids conflict between cars and people (e.g., a basketball hoop in a dead-end roadway);
  - indicate shared uses of roadways through devices such as changes in road surface, variation in road width and signage. Clear delineation of edges and surfaces is important.
- c) To avoid duplication, pathways should be combined with fire lanes wherever possible.

#### 14.4.4.B **Pedestrian Pathways**

- a) Pathways should be treated with decorative surfaces and landscaped with small-scale plant materials, shrubs and trees. Where possible, existing vegetation should be preserved along these pathways.
- b) All paths should be open to the sky.
- c) Maximize visibility and animation along pathways by orienting windows, entries and balconies on adjacent buildings towards pedestrian paths.
- d) Ensure that pathways are well-lit, visible from the street and clearly marked, with entrances embellished by ornamental planters, trees, or prominent architectural components.
- e) Pathway should have focal areas in the form of arrival plazas and entry courts.

#### 14.4.4.B **Public Pedestrian Corridors**

- a) Main pedestrian access corridors through developments should be a minimum of 6 m (19.69 ft.) wide and should:
  - include a paved walkway, minimum 2 m (6.56 ft.) wide, with the distance between adjacent building faces being at least 6 m (19.69 ft.);
  - have a maximum length of 70 m (230 ft.) (as measured between public streets or open spaces), except where the space between adjacent building faces is less than 9 m (29.53 ft.), in which case the maximum walkway length should be 15 m (49.21 ft.) between open spaces;
  - should have focal areas in the form of arrival plazas and entry courts;
  - should provide a series of events and places for the public and residents to experience.

## 14.4.5 Landscaping and Open Space Design

*The intent is to ensure that multiple family residential sites are landscaped with attractive landscaping, screening and surface treatment, enhance the natural beauty of Richmond, improve the livability of the development, and provide adequate separation between uses.*

### 14.4.5.A Public Open Space

#### Trees

- a) Plant trees along all street frontages to form an avenue of trees. The spacing between trees may vary according to the species.
- b) Major internal roadways should be lined with landscaped and treed boulevards. Pedestrian-oriented lighting should be included along the internal roadways.
- c) Trees may be planted in pairs at entranceways to define a gateway.
- d) Landscape all pedestrian paths with trees and other plant materials.

#### Building Setbacks

- a) Building setbacks along major streets are encouraged to provide for “display gardens” and semi-private entry transition areas.
- b) Where a development faces across a street from an existing single family neighbourhood, front yard landscaping features should be used to create a sense of transition. Appropriate features might include: roofed pedestrian entry portals; trellises; and small entry courts edged with ornamental trees, shrubs and plants.

#### Landscape Treatments

- a) Create visual focal points by providing landscaped areas at the curves of internal roads and at the “dead-ends” of development sites. Allow for future pedestrian access to adjacent development areas within the landscaped areas.
- b) Consider using mounds of earth or berms to contain or screen an area and to create visual and textured interest in otherwise flat terrain.
- c) Use landscaped trellises to conceal garages and visitor parking stalls.
- d) Vines or other cover should be planted to soften retaining walls.
- e) Soften hard surfaces through the use of landscaping, trellises and tree planting.

#### Surface Treatment

- a) Show variety and change of use through variations in the colour and texture of materials for patios, walkways and roadways. Use changes in paving materials near entrances to walkways and children’s play areas.
- b) Use a variety of decorative surface treatments (e.g., stamped concrete grey pavers) to soften the visual impact of driveways.
- c) Consider using materials that support children’s play throughout a development (e.g., rubber tiles instead of concrete pavers; walkways for chalk drawings, etc.).
- d) Use permeable surfaces as much as possible.

#### Signage

- a) Signage should have a pedestrian scale and orientation. Back-lit acrylic signs or permanent, free-standing commercial signage will not be permitted.
- b) Way finding signage to visitor parking spaces for residential units should be provided at the entrance to the development, at each location where a visitor vehicle needs to turn and at a maximum spacing of 50 m (164 ft.). The design/format and colour of the way finding signage is to be reviewed and approved by the City.

### 14.4.5.B Semi-Private Open Space

- a) Provide convenient, safe and accessible semi-private open spaces for the common use of all building/complex occupants.
- b) Semi-private open spaces should be clearly defined from public spaces for the exclusive use of building/complex occupants through the use of changes in grade, low walls or fences, planting or siting within the confines of the building.

- c) Spaces should be situated and designed to maximize resident access, surveillance and enjoyment.
- d) Provide landscaping with substantial trees, planting and features appropriate to a range of ages and interests, including families with children.
- e) Illuminate spaces with low-level lighting that provides light and security for semi-private space but does not produce glare into the adjacent residential buildings.
- f) Semi-private open spaces for family-oriented housing should be equipped with children's play apparatus and benches. Locate equipment and seating to take advantage of sun and natural shelter from the weather.
- g) Spaces should be designed to ensure barrier-free access.
- h) Ground surfaces should be paved with a mixture of hard surfaced and natural landscaping.

#### 14.4.5.C Private Open Space

- a) Public and private outdoor space should be clearly defined to enhance both the privacy of residences and the pedestrian experience.
- b) Provide landscaping, terracing, screening, low-level hedges and/or garden walls between private ground oriented outdoor spaces and the public realm;
- c) Separate private outdoor spaces from the semi-private open spaces. Use changes in grade and/or landscaping to ensure the privacy of an individual unit's open space without the use of high fences.
- d) Private outdoor spaces should be separated from the private outdoor spaces of other units for privacy purposes. Private outdoor spaces in family-oriented developments should be "enclosed" (i.e. fenced, for the security of small children and pets).
- e) Where a change in grade no greater than 1.2 m (3.94 ft.) occurs between the outdoor space of a unit and the level of a street or public access it faces, "front stair" connections should be provided between the two outdoor spaces.
- f) Articulate building edges to define private balconies and patios that become a natural extension to the residential unit.
- g) Where a residential front yard provides a unit's only private open space, ensure that this space is usable/practical while also enhancing the streetscape. Changes in grade/terracing should be used in combination with hedges, trees, shrubs, open lattice screens and low fences to provide an area of privacy near the unit while still providing an open, inviting public edge.
- h) Undersides of balconies and porches that are visible from a street or public walkway should be covered by soffits or exterior finishes to provide a finished appearance to public view.
- i) Consider the importance and the safety of small household pets by ensuring that a gap no larger than 5 cm (2 in.) is provided between the ground and the base of a fence. All fences should have gates that provide direct access to semi-private and public areas.

#### Balcony and Outdoor Space Sizes

- a) Ensure a substantial depth of balconies, patios and gardens to create usable and livable outdoor spaces.
- b) Apartment units should have a private outdoor space of 6 m<sup>2</sup> (64.59 ft<sup>2</sup>) in area and 1.8 m (5.9 ft.) in depth, with larger than-minimum spaces strongly encouraged. An area of shelter and privacy should be provided within each private outdoor space. It is suggested that half of the minimum required outdoor space be recessed behind the building face.
- c) Each townhouse unit should have a private outdoor space of 30 m<sup>2</sup> (323 ft<sup>2</sup>) in area (not in average). Private outdoor space provided in the front yard and/or rear yard of the unit should have a depth no less than 4.5 m (14.76 ft.). Private outdoor space provided in the form of balcony and/or deck above the ground floor should have a depth no less than 1.8 m (5.9 ft.).
- d) Paved patio or deck space within a private outdoor space in the yard space should have a depth no more than 2.5 m (8.2 ft.).

#### Balcony and Outdoor Space in Aircraft Noise Sensitive Development

- a) Private balcony space in aircraft noise sensitive development should mitigate the impact of aircraft noise by appropriate siting and/or by using appropriate noise mitigation techniques and architectural treatment (e.g., enclosed balconies) that do not result in the balcony being indoor living space.

- b) Private open space (e.g., patios, decks) in aircraft noise sensitive development should mitigate the impact of aircraft noise by appropriate siting and/or by using appropriate noise mitigation techniques and architectural treatment (e.g., canopies, fences, landscaping) that do not result in the area being indoor living space.

**14.4.5.D Amenity Space**

- a) Indoor and Outdoor amenity space should be provided as outlined in the following chart in order to provide common amenities to be shared by all households in each multiple family development project of more than three units.

Number of Dwelling Units	Indoor Amenity Space Required	Outdoor Amenity Space Required
0-3 units	None	None
4-19 units	<ul style="list-style-type: none"> <li>Indoor amenity space of a minimum of 50 m<sup>2</sup> (538 ft<sup>2</sup>).</li> </ul>	<ul style="list-style-type: none"> <li>Outdoor amenity space of 6.0 m<sup>2</sup> (64.59 ft<sup>2</sup>) per unit.</li> <li>Outdoor space should be designed to facilitate children's play.</li> </ul>
20-39 units	<ul style="list-style-type: none"> <li>Indoor amenity space of a minimum of 70 m<sup>2</sup> (753 ft<sup>2</sup>).</li> </ul>	<ul style="list-style-type: none"> <li>Outdoor amenity space of 6.0 m<sup>2</sup> (64.59 ft<sup>2</sup>) per unit.</li> <li>Outdoor space should be designed to facilitate children's play and 3.0 m<sup>2</sup> (32.29 ft<sup>2</sup>) per unit should be designed as a children's play area.</li> </ul>
40 units of more	<ul style="list-style-type: none"> <li>Indoor amenity space of a minimum of 100 m<sup>2</sup> (1,076 ft<sup>2</sup>).</li> </ul>	<ul style="list-style-type: none"> <li>Outdoor amenity space of 6.0 m<sup>2</sup> (64.59 ft<sup>2</sup>) per unit.</li> <li>Outdoor space should be designed to facilitate children's play and 3.0 m<sup>2</sup> (32.29 ft<sup>2</sup>) per unit should be designed as a children's play area.</li> <li>The maximum play area size is 600 m<sup>2</sup> (6,459 ft<sup>2</sup>).</li> </ul>

**14.4.5.E Indoor Amenity Space**

- a) The amenity space shall include a multi-purpose facility designed to accommodate a variety of activities such as parties, children's play and meetings (e.g., involving 40% of the development's estimated adult population).
- b) In larger, family-oriented developments, special emphasis should be placed on the design of indoor amenity space and associated outdoor areas in order that they may provide opportunities for licensed childcare use (should such a need be recognized) without compromising tenant needs.
- c) Indoor amenity spaces should be located on the south face of buildings and should be linked directly to outdoor amenities and to public walkways wherever possible.

**14.4.5.F Outdoor Amenity Space**

**Location**

- a) Outdoor amenity space should be in a central location on the site where it is convenient for the largest number of residents on site and contiguous with an indoor amenity space wherever possible.
- b) Outdoor amenity space may also locate in the area where existing landscape features are to be retained on site.
- c) Outdoor amenity space may also locate adjacent to open space on a neighbouring multiple family site. Siting and design of these open spaces should be complementary and should encourage common use by residents of both sites. No fence or barrier shall be erected between the open spaces, though changes in grade may be used to better define public versus semi-public areas.
- d) Outdoor amenity spaces and play areas should not be located near parking areas or garbage/recycling storage areas.
- e) Locate the outdoor amenity area to take advantage of sunlight and of natural shelter from inclement weather.
- f) Outdoor amenity space located within any required yard setback is discouraged. If this situation is unavoidable, the size of the outdoor amenity area should be substantially larger and wider than the minimum requirement in order to provide an adequate landscape buffer to deal with the interface along the property lines and clearly differentiate public, semi-private and private spaces.
- g) Amenity areas should be consolidated in one compact area as linear or scattered configurations are generally not as successful in meeting residents' needs.



- h) The minimum longitudinal dimension for an outdoor amenity space should be 5 m (16.4 ft.). It is recommended that an outdoor amenity space, when located on ground level, should have at least 50% of the minimum longitudinal dimension front an internal road or walkway.
- i) The recommended shape configuration should be a maximum ratio of 1:3 (width to length).
- j) Ensure that surveillance of the area is provided from adjacent units and that the area has barrier-free access.

### **Play Areas**

- a) For multiple family developments up to 19 units in size, outdoor space should be designed to facilitate children's play. For developments over 19 units in size, children's play space should be provided at a ratio of 3 m<sup>2</sup> (32.29 ft<sup>2</sup>) per unit. The maximum suggested size for a children's play area is 600 m<sup>2</sup> (6,459 ft<sup>2</sup>).
- b) Locate children's play apparatuses and benches within the open space along with other urban design features such as gardens, fountains, arbours and art.
- c) Outdoor fenced play areas should be located, where possible, adjacent to indoor spaces on the south side of the buildings, in a sunny location protected from easterly wind. Opportunities for passive adult surveillance should be provided, such as seating nearby and/or arrangement of windows and viewing decks that permit observation of children at play.

### **Surface Treatment**

- a) Provide a mixture of permeable hard-surfaced and natural landscaping in the outdoor amenity area.

### **Aircraft Noise Sensitive Development Outdoor Amenity Space**

- a) Outdoor amenity space in aircraft noise sensitive development should mitigate the impact of aircraft noise by appropriate siting and/or replacing outdoor amenity space with an equivalent area of additional indoor amenity space designed to facilitate children's play, senior's enjoyment, or other appropriate passive recreational use.

## **14.4.6 Services**

*The intent is to ensure that multiple family residential developments provide adequate garbage, recycling, organics, mail and other services for the convenience of the residents.*

### **14.4.6.A Garbage and Recycling**

- a) There should be a minimum of one garbage container per complex.
- b) Recycling should be provided at a minimum of one facility for each 10 residential units, with a minimum of 3 carts per depot area (3 bins for 3 material types).
- c) Organics (food scraps, etc.) collection should be included on-site.
- d) Refer to the City's document entitled "Waste Management Guidelines for Multiple-Family Residential and Mixed-Use Buildings" for additional requirements and details.

### **Recycling, Garbage and Organics Storage**

- a) A room in the development or a gated and covered structure should be provided to contain residents' garbage, recycling and organics materials.

### **Recycling, Garbage and Organics Storage Area Design**

- a) The design of this structure should complement the design of the units in the project.
- b) The enclosure should be in a central location that is easily accessible to all residents but away from pedestrian accesses and children's play areas.
- c) Landscape screening of the enclosure should be provided. The area should be easily accessible for collection purposes and should provide adequate manoeuvring space for 13.7 m (44.95 ft.) long garbage trucks.
- d) A recycling area of a minimum of 2.4 m (7.87 ft.) by 3.5 m (11.48 ft.) in size for each 30 units, should also be provided near garbage areas.
- e) The recycling area should be well lit, sprinklered, separated from the remainder of the building by a one-hour fire separation and wheelchair accessible.

- f) If located outdoors, the recycling area should be screened from public view, without a roof and a minimum 3 m (9.84 ft.) away from a combustible building. Located next to a building, the side of the building next to the recycling area should be of non-combustible materials.

**On-site Composting**

- a) Consider providing an area for on-site composting to generate materials that can be used for landscape maintenance or to allow for garden plots on the site.

**14.4.6.B Mail Delivery**

- a) Provide a covered mail box in a central location that is easily accessible to all residents. The design of this structure should be to Canada Post standards and be compatible with the design of the units in the project.

**14.4.6.C Storage**

- a) Provide adequate area for storage within dwelling units, particularly for family-oriented developments.

**14.4.7 Acoustics**

*The intent is to minimize the impacts of aircraft noise and traffic/transit noise to residential developments.*

- a) Provide acoustic separation between dwelling units, particularly in family-oriented developments. Control sound transmission passively through unit design (e.g., avoid placing bedrooms of one unit adjoining the living room of the neighbouring unit; avoid hard-surfaced floor areas such as kitchens over bedrooms or other quiet rooms).

**14.4.7.A Traffic/Transit Noise and Commercial/Industrial Adjacency**

- a) Developments that may be affected by land use interface issues (traffic/transit noise, commercial/industrial adjacency) must be designed and constructed in a manner that mitigates potential noise within the proposed dwelling units. Dwelling units must be designed and constructed to achieve:

- ASHRAE 55-2004 "Thermal Environmental Conditions for Human Occupancy" Standard for interior living spaces;
- CMHC guidelines for interior noise levels as indicated in the chart below:

Portions of Dwelling Units	Noise Levels (decibels)
Bedrooms	35
Living, dining, recreation rooms	40
Kitchen, bathrooms, hallways and utility rooms	45

- b) All Development Permit applications are required to provide an acoustical report to demonstrate how all residential units meet the above requirements. Inclusion of the thermal requirements is critical as being able to meet thermal comfort standards with the windows closed during the summer months is extremely important. All units within the project are to meet these standards. The source noise level referenced in the acoustical report should be based on the maximum source level noise permitted by the City Noise Bylaw.
- c) The acoustical report must also detail whether additional noise alternatives is required due to the proximity of the Canada Line guideway or station platform.
- d) New multiple family residential development adjacent to the Canada Line guideway is to ensure the building design reflects Canada Line adjacency. Where possible, residential units should not be created directly adjacent to the guideway (e.g., avoid residential units at the guideway elevation if possible).
- e) Where private outdoor space is adjacent to noise source (i.e., arterial roads, commercial/industrial developments), noise mitigating measures should be utilized, such as fencing, berming and landscaping; or provide special mitigation measures as determined by a registered professional trained in acoustics.
- f) Noise from major street and commercial/industrial interface can also be mitigated by:
- careful site layout;
  - orienting private outdoor spaces away from noise source;
  - orienting the front entry and public part of the dwelling toward the noise source and locating quiet rooms such as bedrooms away from the noise source;

- recessing balconies and facing them with solid balustrades;
- finishing soffits with material which absorbs or baffles sound waves;
- providing extra insulation for walls of buildings adjacent to the noise source;
- triple-glazing windows to reduce noise infiltration;
- using enclosed balconies or sunrooms facing the noise source as a buffer between living areas and the noise source.

**14.4.7.B Aircraft Noise**

a) All Development Permit applications in areas identified in the Aircraft Noise Sensitive Development Map (see Section 3.6.3 Noise Management) shall require evidence in the form of a report and recommendations prepared by a person trained in acoustics and current techniques of noise measurement, demonstrating that the noise level in those portions of the dwelling units listed below shall not exceed the noise level and thermal condition standards set out in the corresponding right-hand column and the ASHRAE 55-2004 “Thermal Environmental Conditions for Human Occupancy”. The noise level utilized is an A-weighted 24-hour equivalent (Leq) sound level and will be defined simply as noise level in decibels.

Portions of Dwelling Units	Noise Levels (decibels)
Bedrooms	35
Living, dining, recreation rooms	40
Kitchen, bathrooms, hallways and utility rooms	45

- b) Skylights are discouraged in homes located within the area identified in the Aircraft Noise Sensitive Development Map.
- c) In addition to the above, a trained professional is to assist in the design of the private patios and balconies to minimize the noise levels with recommendations for building material selection and space planning.

**14.4.8 Edge Conditions (Environmentally Sensitive Areas and Public Open Space)**

*The intent is to accommodate and encourage new development while responding to and enhancing adjacent uses such as parkland or environmentally sensitive areas.*

a) Where multiple family sites lie adjacent to an ESA or park, these landscapes should be “extended” into and through the multiple family site, especially along walkways, pathways, semi-public open spaces, and public areas. In addition, dense planting of indigenous plant material (with appropriate soil and irrigation conditions) should be provided to screen any fences on or adjacent to the ESA from the view of residents.